

PGS7010 Module Handbook 2025 - 26

September 2025

Course Lead: *Rob Campbell*
Lecturer in science Education Tamsyn Nicol

School of Education

St Mary's University
Waldegrave Road, Twickenham TW1 4SX
Switchboard 0208240 4000
www.stmarys.ac.uk

Contents	Page
Introduction	3
Useful Contacts	4
Module Aims and Outcomes	5
Attendance and absences	6
Assessment deadlines	7
Science Module	8
Essay Task	9
Critical engagement and analysis of literature	10
Assignment checklist	11
Academic Work- Presenting Work	12
Academic Work: Referencing Policy	12
A guide to academic conduct	13
Non-Academic Misconduct	13
Student Complaints procedures	13
Studying without Harassment	13
Essay Grade Criteria	15-17

INTRODUCTION

Welcome to the Science PGCE course at St Mary's University. As a student of St Mary's you will be supported throughout your programme by our excellent pastoral approach from the whole of the university community. As part of the School of Education (SoE) the course is built on the SoE's firm values-based and vocational foundation centred on the University's core values of inclusiveness, generosity of spirit, respect and excellence.

Our main aim is to help you attain a high degree of competence as a secondary school teacher and develop a creative and effective approach to the teaching of science. Tamsyn, your link tutors and I will be working with you in partnership with your placement schools throughout the year.

Studying for a PGCE in science will be a challenging and rewarding experience. It will also be an intensive year that not only demands intellectual engagement but also considerable stamina and resilience. The greater your commitment to making the most of every learning opportunity, the greater the benefit you will derive from your training.

The course is an active combination of lectures, workshops, lab-based sessions and tutorials. You are encouraged to share your own expertise, life and learning experiences to promote reflective and effective practice. Written assignments allow you to explore the most recent developments in research in teaching and learning, and what you have gained during your teaching practice. Moreover, they provide an opportunity to develop a greater fluency in the scientific knowledge covered in the national curriculum.

This module guide should be a useful **working document** for you; please do refer to it throughout the course. You will also have access to the Professional Studies (PS) module, School Experience modules, and other course documentation via Moodle. In addition, you can download your own copy of the training documents, which contain helpful information for your school-based training. science course documents and resources can be found via Moodle on the SUBJECT module.

A subject knowledge audit is carried out at the start of the course to enable you to focus on key areas for development. Together, we will agree on an individual training/action plan for university and school-based activities to help you achieve your targets; progress will be monitored at key intervals during the year, when you will formally review your subject knowledge. Although the science-specific sessions will help you increase your scientific knowledge, it is your responsibility to seek opportunities to update your subject knowledge continuously. Nonetheless, we will direct you to resources and support as appropriate. Furthermore, you will be expected to develop your IT skills throughout the year following an initial audit and subsequent reviews.

Please be aware that the **programme details are a draft** and that some dates may change. Should that be the case then you will generally be advised in advance. Every effort has been made to make sure that this document is correct at time of writing.

I wish you a successful and enjoyable year.

Contacts:

Head of the School of Education	Dr Jane Chambers	jane.chambers@stmarys.ac.uk
Head of Department Initial Teacher Education	Sarah Brooks	Sarah.brooks@stmarys.ac.uk
Head of Department School Partnerships	Mary Nkune	mary.nkune@stmarys.ac.uk
Subject Lead PGCE Secondary with QTS	Jemima Davey	jemima.davey@stmarys.ac.uk
Course Lead	Rob Campbell	Rob.campbell@stmarys.ac.uk
Science tutor	Tamsyn Nicol	Tamsyn.nicol@stmarys.ac.uk
Link Tutors	Irena Grounds	Irena.grounds@stmarys.ac.uk
	Jackie Small	Jackie.small@stmarys.ac.uk
	Philip Snell	Philip.snell@stmarys.ac.uk
	Sophie Wilson	Sophie.wilson@stmarys.ac.uk
School Partnership Administrators	Jackie Higgins Michi Penrice	secondarypartnerships@stmarys.ac.uk
Abyasa Co-Coordinator	Julie Smeaton	abyasahelp@stmarys.ac.uk
Recruitment and Admissions Tutor	Farhana Irshad	farhana.irshad@stmarys.ac.uk

Aims of Module PGS7010 Science Specialism

This module aims to educate trainee teachers as they develop into committed and enthusiastic reflective practitioners in their progression towards Qualified Teacher Status (QTS). It seeks to support the development of emergent confident teachers who are aware of the positive contribution they make to the profession and so engender successful learners, confident individuals and responsible citizens in schools. The module enables trainee teachers to successfully engage with the [Initial Teacher Training Early Career Framework \(DfE, 2024\)](#) in order to make progress towards the [Teachers' Standards \(2011\)](#). Concepts included through professional studies themes are explored with a subject discipline lens so that trainees may understand science pedagogy.

The module outcomes are achieved through the following content:

- Enable trainee teachers to develop a critical understanding of relevant theories and current research into subject specific pedagogy in relation to behaviour for learning, how pupils learn, planning, adaptive teaching, and assessment.
- Develop trainee teachers as reflective practitioners through investigation, critical analysis and evaluation of their own values and beliefs related to subject specific pedagogy.
- Develop trainee teachers' understanding of the relationship between theory and practice.
- Enable trainee teachers to gain understanding and critical insights into the effectiveness of a range of teaching and learning strategies for inclusive practices related to their subject discipline.
- Promote the ongoing development of the trainee teachers' subject knowledge and scientific skills to identify and support their own learning and developmental needs in their early years of teaching.
- Enable trainee teachers to effectively justify **their** choice of teaching methods to teach subject knowledge and scientific skills simultaneously.

Module Learning Outcomes

By the end of this module trainees will be able to:

1. Demonstrate knowledge of subject specific pedagogical approaches that promote pupil learning.
2. Synthesise a range of evidence to inform strategies to promote pupil progress.
3. Evaluate research evidence to link theory to practice.
4. Critically reflect and evaluate the impact of effective teaching and inclusion strategies.

Attendance

All attendance in university-based sessions will be recorded via the MySMU app using log-in code. The code is time sensitive and location dependent. Staff will share the code at the start of each session. You must complete your log-in within 10 minutes of the start of a session to avoid being marked absent. If you attend a session on time, but are unable to register your attendance, you will need to contact the lecturer leading that session via email. You will be asked to provide evidence that you attended the session on time.

Attendance at university-based sessions is of equal importance to attendance in school. Neither are optional.

Full attendance and active participation are expected as part of the professional requirements of the course. Attendance on all modules is required. Attendance below 90% will automatically trigger additional tutorials with your assigned tutor.

For international students, we have to report your attendance to the home office. Poor attendance can result in your visa being revoked. It is imperative that you attend each session on time.

Cancellation of timetabled classes

On the very rare occasions where it may be necessary for timetabled classes to be cancelled or rearranged, we will alert you at the earliest opportunity. Wherever possible we will give you advance warning through **in-lecture announcements, by email or through Moodle**. However, sometimes where little or no notice is possible, we will place a notice on or near the classroom where the teaching was due to take place.

Absences:

If you are unable to attend university you must contact your subject tutor **before** the start of the working day. It is your professional responsibility to do this.

If your absence is during your school placement, you must also contact the school again before the start of the school day.

Assessment Deadlines – Overview of programme dates.

The table below compiles a full list of the assignments you must complete. All assignments linked to a PGS module code are submitted to the relevant Moodle page by the deadline listed.

Module	Assessment Task	Submission site	Date	Time
PGS7007	Professional Studies essay	PGS7007 Moodle page	25/01/2026	6pm
PGS7007	Professional Studies (Resit)	PGS7007 Moodle page	08/03/2026	6pm
PGS7010	Subject Specialism essay	PGS7010 Moodle page	03/05/2026	6pm
PGS7010	Subject Specialism (Resit)	PGS7010 Moodle page	07/06/2026	6pm
PGS6048 School 1	Foundation phase Progress Record	Abyasa	12/12/2025	6pm
PGS6048 School 1	Foundation phase Presentation	PGS6048 Moodle Page	16/12/2025	6pm
PGS6049 School 2	Development phase Progress Record	Abyasa	22/03/2026	6pm
PGS6049 School 2	Development phase Presentation	PGS6049 Moodle page	29/03/2026	6pm
PGS6050 School 3	Assessment Record	Abyasa	19/06/2026	6pm
PGS6050 School 3	Consolidation phase Presentation	PGS6050 Moodle page	28/06/2026	6pm
	Fundamental Skills	Abyasa	28/06/2026	6pm
	Transition Doc	Abyasa	28/06/2026	6pm

Module Code: PGS7010
Module Name: Science: Subject Specialism Pedagogy

Why are you studying this module?

The science pedagogy sessions aim to develop knowledgeable, caring, committed, enthusiastic, professional, imaginative, thoughtful and reflective science teachers. This module uses research-informed pedagogical approaches to develop excellent science teachers.

Module Aims

This module aims to educate student teachers as they develop into committed and enthusiastic reflective practitioners in their progression towards Qualified Teacher Status (QTS). It seeks to support the development of emergent confident teachers who are aware of the positive contribution they make to the profession and so engender successful learners, confident individuals and responsible citizens in schools.

Learning Outcomes

At the end of this module, trainee teachers will be able to:

1. Apply their pedagogical knowledge and understanding in order to develop effective teaching and assessment strategies. This includes the effective and purposeful use of practical work.
2. Develop their own SK in order to teach mathematics effectively
3. Clarify the importance and process of short-term and medium-term planning within their specific discipline
4. Explain the importance of and processes involved when developing an inclusive classroom;
5. rationalise the use of assessment strategies used within schools;
6. Use Intensive Training (ITaP) to inform their practice in school. The four ITaPs are on the following areas: Managing Behaviour, Effective Questioning, Assessment for Learning & Adaptive Teaching. Each of these training opportunities lasts for a full week (and some interweave with days in school)

Science timetable. Please use the following link to access the science timetable.

[Science timetable](#)

Please note sessions are subject to change, and roomings will be available through your outlook calendar and MySMU app.

Key to Sessions:

Green (Subject Specific Science content)

Yellow (General Professional Studies (PS) Sessions
Whole Cohort in Lecture Theatre)

Blue (PS Sessions – Delivered SMU Subject Lecturers – Mixed subject Groups – See PS Moodle for Groups and Rooms)

Assignment Task: M Level Subject Essay

Indicative Structure and word counts

Essay (4,500 words):

Engaging critically with education theory, research, professional debate, and evidence-informed practice, evaluate how a chosen pedagogical method* has enabled a class of pupils to secure foundational knowledge and learn more complex ideas over the course of three lessons you have taught.

* e.g., assessment, feedback, modelling, adaptive teaching, cognitive learning theory or mental modelling

Appendices (1,500 words equivalent):

Your essay must include appended illustrations of how you enabled a class of pupils to learn more complex ideas by including in an appendix to the essay:

- Three lesson plans and evaluations
- Lesson feedback on one of the three lessons from an expert colleague
- Professional development conversations / weekly training notes

Guidelines:

When completing the above task, it is suggested you address the following:

- ☐ Critically evaluate the use of educational theory, research, professional debate and evidence-informed practice in facilitating learning in your subject ☐
- ☐ Demonstrate your engagement with educational theory, research, professional debate and evidence-informed practice in your chosen pedagogical issue to show how it influences decisions made in your planning for your curriculum area, and its impact on pupil progress ☐
- ☐ In the **appendices**, show how you have engaged with educational theory, research, professional debate and evidence-informed practice and what impact there has been on pupil progress with a range of evidence from your school experience. Evidence must include: ☐
- ☐ Three lesson plans and evaluations
- ☐ Lesson feedback on one of the three lessons from an expert colleague
- ☐ Professional development conversations / weekly training notes

Referencing Procedure:

For referencing purposes, the PGCE Secondary programme requires all students adhere to Harvard referencing protocols and in doing are recommended to use Cite Them Right.

Submission:

- ☐ Submission is to Turnitin via your **subject** Moodle
- ☐ The word count for the assignment is as follows: 6000 words, which is made up of a 4,500 word essay + evidence in the appendices ☐
- ☐ The submission must include two separate files. The first file is inclusive of the essay and appended evidence. The second file is the reference list Please follow submission guidelines on Moodle, including for the file names for each part of the assignment

Critical engagement and analysis of literature

Critical engagement is the critiquing of academic literature whereby the reader considers the following questions:

- What are the key arguments being presented by the author in relation to the subject?
- Are these arguments robust?
- Do you accept or challenge their arguments?
- Are there other authors that agree with them (and possibly you)?
- Are there other authors who disagree with them (and possibly you)?
- Why are there different views? Is this in relation to the context of the author (time, geography, and politics?) or are there different views within the same context based on differing evidence sources?

If the evidence is based upon research then consideration must be given to where, when and how the research was undertaken.

- Is the geographical location of the research comparable to the context of the writer (you)?
- When was the research undertaken? Has society/politics/education **changed** since that time?
- Is the methodology robust? Is there an appropriate sample group? Does the sample represent the context of your own experience? Does it lead to results that can be trusted to be part of your own argument either in support or defence of your position?
- It is also interesting to note who the researcher is and their other work as they may have developed their argument.

You need not give an answer to every question above when developing a point but should have considered them when developing your argument.

Useful Tips for Quotations

- ☐ Do not quote for the sake of it. A quotation should be used to illuminate a point just made or about to be made.
- ☐ Avoid quoting in a vacuum. Do not assume a quotation, on its own, will make your point without any further contribution from you. You need to show why you have chosen it and how it illustrates your argument.
- ☐ Avoid quoting at great length. Sometimes quoting at length may be justified but usually keep quotations to a reasonable length.
- ☐ Avoid making your quotations mere duplicates of the points they accompany. Use your quotations to comment on them and to draw out issues and extend debate.

Checklist for your assignment

When planning and checking your essay, please consider the following:	✓ or x
Have you read the assignment task and guidance carefully, and understood the requirements of the task?	
Have you engaged fully with the Masters sessions which are an integral part of the course? This will include preparatory reading to inform your assignment work.	
Have you ensured that there is a coherent structure and presentation with clarity of intention and purpose in your essay?	
Have you provided evidence of extensive relevant and contemporary reading which supports conceptual analysis and discussion?	
Have you avoided 'blanket' statements or lengthy descriptions without any validation offered through citations?	
Although quotations of work should be used to validate a given theoretical position or should be used as material for analysis, have you listing a series of quotations from various authors which does not constitute analysis?	
Have you checked protocols for Harvard referencing?	
Have you adhered to the word count (plus or minus 10%) stated?	
Have you proof-read your work carefully to ensure good use of English?	
Have you double-line spaced the assignment, with the exception of lengthy quotations (3 lines or more) and the reference list;	
Have you paginated the assignment?	
Have you checked the essay deadline?	
Have you checked the essay submission page to ensure you have access?	

Academic Work: Presenting Work

- ☐ Coursework presented must meet the following requirements:
- ☐ **A Cover Page** giving your regnum, module code and the title of the assignment. Do not include your name as marking is **anonymous**;
- ☐ **Wide** margins (2.5 cm left and right, top and bottom) to allow for the marker's comments – this applies to online submissions where comments are inserted electronically;
- ☐ **Double-spacing** for text;
- ☐ Standard and simple **font** (e.g. Helvetica or Arial) using **12 points** for the main body of the essay;
- ☐ **Paginate**;
- ☐ **Word count** at the end of the essay (this should not include the list of references) – make sure you are within 10% of the recommended number of words required for the particular piece of coursework;
- ☐ **Referencing** which respects academic protocols, using the School of Education, Theology and Leadership's (Harvard System) style;
- ☐ **List of References** – all sources used in your essay **must** be listed alphabetically (in the recommended style).

Academic Work: Referencing Policy

Please use the online Referencing Guidance 'Cite Them Right'.

All assignments should adhere to Harvard referencing protocols. For guidance, please click:
<http://www.citethemrightonline.com/>

Please refer to the Programme handbook for full details of PGCE Secondary with QTS assessment procedures and related information.

A Guide to Academic Conduct

Whilst being supported and guided by the tutorial/supervisory team, trainees will also undertake their own research, preparation and planning as they construct their assessment tasks. This is a vital element of learning, and it is important to remember that the assessments are an integral part of that learning – not simply a way of testing *what* has been learned.

- That learning process only has meaning and value if they present their own thoughts, analysis – work.
- That is the standard of academic conduct that we expect, and hope, our trainees attain – however, we do have procedures in place to address any apparent instances of academic misconduct.
- Academic Misconduct is taken very seriously by the University, and trainees should be aware that the consequences of such misconduct can be serious.
- Examples of behaviours considered to constitute academic misconduct are as follows:
 - o copying work from reference sources or other trainees (**plagiarism**);
 - o using elements of own work more than once and without referencing the original (**auto-plagiarism**);
 - o using elements of work already submitted resulting in ‘double crediting’ work;
 - o working too closely together with other trainees to produce very similar submissions (**collusion**);
 - o allowing another trainee(s) to copy work (**unfair advantage**);
 - o fabricating results or other outcomes that form part of the work (**falsification of data**).

Academic Misconduct – Guidelines for Trainees

The above represent the most common forms of academic misconduct, however, trainees should refer to the “Academic Misconduct – Guidelines for Trainees” on SIMMSpace in order to familiarise themselves with the more detailed information about the types of academic misconduct. These Guidelines also explain the process that will be followed when a trainee is suspected of academic misconduct; and the types and levels of sanctions that will be applied when cases are proven.

Non-Academic Misconduct

Trainees should please note that Academic Misconduct and other forms of Student Misconduct are addressed via different processes. Allegations of Misconduct which are not categorised as academic will be investigated and progressed by the Head of Institute or Service (or nominee) according to Section 4 of the Student Disciplinary Procedures.

Student Complaints procedures

There may be times, when the quality and standard of the educational experience or wider experience at the University does not meet reasonable expectations. Trainees are entitled to complain and to make known their concerns.

The Student Complaints Procedures can be found on SIMMSpace under ‘My Degree Programme’, then going to ‘Registry (Student Administration)’. The procedure is under ‘University Policies and Procedures’:

<http://simmspace.stmarys.ac.uk/prog-admin/registry-policies/policies-complaints-disciplinary/Pages/Complaints-Procedure.aspx>

Studying without Harassment

The University accepts that all trainees have a statutory right to be treated with dignity and respect at work in an environment free from bullying and harassment. This policy can be found on SIMMSpace under ‘My Degree Programme’, then going to ‘Registry (Student Administration)’.

The policy is under ‘University Policies and Procedures’ in the ‘St Mary’s Policies and Regulations’ section:

<http://simmspace.stmarys.ac.uk/prog-admin/registry-policies/policies-complaints-disciplinary/Pages/Policies-Regulations.aspx>

Essay Grade Criteria

Essay Grade Criteria Grading criteria	Knowledge and Understanding: chosen pedagogic area	Intellectual skills: Critique of the use of evidence-informed practice and its impact on pupil progress	Enquiry and research skills: structure and word count	Scholarly practices: academic literacy and Harvard referencing	Professional and life skills: Appendices
0 – 39 Fail	Very limited understanding of chosen pedagogic area and how educational theory, research, professional debate and evidence-informed practice influences pupils' learning of foundational knowledge and more complex ideas.	Very limited critique, reflection or analysis of educational theory, research, professional debate, and evidence-informed practice links with pupil progress within a given school context, including links to supporting evidence found within appendices.	Very limited consideration of presentation. Number of words is not within plus or minus 10% of word count (not including appendices). Work is not paginated and/or double line spaced. Limited proof-reading for correct use of grammar and spelling.	Very limited engagement with relevant reading to support critique, reflection or analysis. Very limited understanding of the use of Harvard referencing, including numerous inaccuracies in citations and / or reference list.	Very limited evidence to support claims to theory and practice found within essay.
40 – 49; Fail	Limited understanding of chosen pedagogic area and how educational theory, research, professional debate and evidence-informed practice influences pupils' learning of foundational knowledge and more complex ideas.	Limited critique, reflection or analysis of educational theory, research, professional debate, and evidence-informed practice links with pupil progress within a given school context, including links to supporting evidence found within appendices.	Limited consideration of presentation. Number of words is (not) within plus or minus 10% of word count (not including appendices). Work is (not) paginated and/or double line spaced. Limited proof-reading for correct use of grammar and spelling.	Limited engagement with relevant reading which tends to support critique, reflection or analysis. Use of Harvard referencing with some consistent inaccuracies in citations and or reference list.	Limited relevant evidence to support claims to theory and practice found within essay.

Grading criteria	Knowledge and Understanding: chosen pedagogic area	Intellectual skills: Critique of the use of evidence-informed practice and its impact on pupil progress	Enquiry and research skills: structure and word count	Scholarly practices: academic literacy and Harvard referencing	Professional and life skills: Appendices
50 - 59: Pass	Satisfactory understanding of chosen pedagogic area and how educational theory, research, professional debate and evidence- informed practice influences pupils' learning of foundational knowledge and more complex ideas.	Satisfactory critique, reflection or analysis of educational theory, research, professional debate, and evidence-informed practice links with pupil progress within a given school context, including links to supporting evidence found within appendices.	Number of words is (not) within plus or minus 10% of word count (not including appendices). Work is (not) paginated and/or double line spaced. Satisfactory proof- reading for correct use of grammar and spelling.	Satisfactory engagement with relevant reading which tends to support critique, reflection and analysis. Use of Harvard referencing with some consistent inaccuracies in citations and or reference list.	Inclusion of some relevant evidence to support claims to theory and practice found within essay
60-69: Pass	Good understanding of chosen pedagogic area and how educational theory, research, professional debate and evidence- informed practice influences pupils' learning of foundational knowledge and more complex ideas.	Good critique, reflection or analysis of educational theory, research, professional debate, and evidence-informed practice links with pupil progress within a given school context, including links to supporting evidence found within appendices.	Number of words is within plus or minus 10% of word count (not including appendices). Work is paginated and/or double line spaced. Accurate proof-reading for correct use of grammar and spelling.	Good engagement with relevant reading which often support critique, reflection and analysis. Consistent use of Harvard referencing with few minor inaccuracies in citations and or reference list.	Inclusion of relevant evidence to support claims to theory and practice found within essay.

Grading criteria	Knowledge and Understanding: chosen pedagogic area	Intellectual skills: Critique of the use of evidence-informed practice and its impact on pupil progress	Enquiry and research skills: structure and word count	Scholarly practices: academic literacy and Harvard referencing	Professional and life skills: Appendices
70-79: Pass	Very good understanding of chosen pedagogic area and how educational theory, research, professional debate and evidence-informed practice influences pupils' learning of foundational knowledge and more complex ideas.	Very good critique, reflection or analysis of educational theory, research, professional debate, and evidence-informed practice links with pupil progress within a given school context, including links to supporting evidence found within appendices.	Number of words is within plus or minus 10% of word count (not including appendices). Work is paginated and/or double line spaced. Accurate proof-reading for correct use of grammar and spelling.	Very good engagement with relevant reading which supports critique, reflection and analysis. Consistent use of Harvard referencing with few minor inaccuracies in citations and / or reference list.	Inclusion of relevant evidence to support claims to theory and practice found within essay.
80-100: Pass	Excellent understanding of chosen pedagogic area and how educational theory, research, professional debate and evidence-informed practice influences pupils' learning of foundational knowledge and more complex ideas.	Excellent critique, reflection or analysis of educational theory, research, professional debate, and evidence-informed practice links with pupil progress within a given school context, including links to supporting evidence found within appendices.	Number of words is within plus or minus 10% of word count (not including appendices). Work is paginated and/or double line spaced. Accurate proof-reading for correct use of grammar and spelling.	Excellent engagement with relevant reading which rigorously supports critique, reflection and analysis. Consistent use of Harvard referencing with no errors in citations and / or reference list.	Inclusion of relevant evidence to support claims to theory and practice found within essay